云 南 植 物 研 究 1999, 21 (1): 37~42
Acta Botanica Yunnanica

我国新担子菌类补遗*

臧 穆[1] 袁明生[2]
([1] 中国科学院昆明植物研究所隐花植物标本馆，昆明 650204)
([2] 中国科学院成都生物研究所，成都 610041)

摘要 在研究甘肃、四川、云南的担子菌类时发现如下4新种：云南地红菇（*Macowanites yunnanensis* Zang），属红菇科（Russulaceae），地红菇属（*Macowanites* Kalchbr.）系我国新记录；松针锈耳（*Crepidotus pinicola* Zang）绣耳科（Crepidotaceae）；蛇盖条孢牛肝菌（*Boletellus serpentipileus* Zang et Yuan），属松塔牛肝菌［疣孢牛肝菌科］(Strobilomycotaceae)；喜杉绒盖牛肝菌（*Xerocomus piceicola* Zang et Yuan），属牛肝菌科（Boletaceae）；长柄灰包（*Lycoperdon longistipum* Zang et Yuan），属灰包科（Lycoperdaceae）。

关键词 地红菇属，云南地红菇，蛇盖条孢牛肝菌，喜杉绒盖牛肝菌，长炳灰包
分类号 Q 949

Contribution to the Knowledge of New Basidiomycoteous Taxa from China

ZANG Mu[1] YUAN Ming - Sheng[2]
([1] *Cryptogamic Herbarium, Kunming Institute of Botany, The Chinese Academy of Sciences*, Kunming 650204)
([2] *Chengdu Institute of Biology, The Chinese Academy of Sciences*, Chengdu 610041)

Abstract Five new taxa of Basidiomycota are previously undescribed from Gansu, Sichuan, Yunnan of China. 1. *Macowanites yunnanensis* Zang (Russulaceae), the genus *Macowanites* Kalchbr. is a new record to China. 2. *Crepidotus pinicola* Zang(Crepidotaceae). 3. *Boletellus serpentipileus* Zang et Yuan (Strobilomycetaceae). 4. *Xerocomus piceicola* Zang et Yuan (Boletaceae). 5. *Lycoperdon longistipum* Zang et M. S. Yuan (Lycoperdaceae). The morphological differences, habitats and similarities of these new taxa are compared with closely related species. The holotypes are deposited in the Cryptogamic Herbarium, Kunming Institute of Botany (HKAS).

Key words *Macowanites*, *M. yunnanensis*, *Boletellus serpentipileus*, *Xerocomus piceicola*, *Lycoperdon longistipum*

Species Descriptions

云南地红菇

Mlacowanites yunnanensis Zang, sp. nov. (Fig. 2: 6~8)

* 国家自然科学基金资助项目（39470004）
1998-04-03 收稿，1998-04-04 接受发表

Peridium 0.7 ~ 1.2 cm latum, late convexum, glabrum, glutinosum, pallidum, demum subroseum. Gleba sublamellata. Stipes albus. Basidia 20 ~ 30 × 9 ~ 12 μm clavata. Basidiosporae 10 ~ 12.5 × 6 ~ 7 μm subglobosa vel globosa, ornationis 0.3 ~ 0.5 μm altis, subreticulatis. 4 – sporigera. Pleurocystidia 15 ~ 25 × 6.5 ~ 8 μm fusiformia. Cheilocystidia 20 ~ 35 × 8 ~ 17 μm clavata.

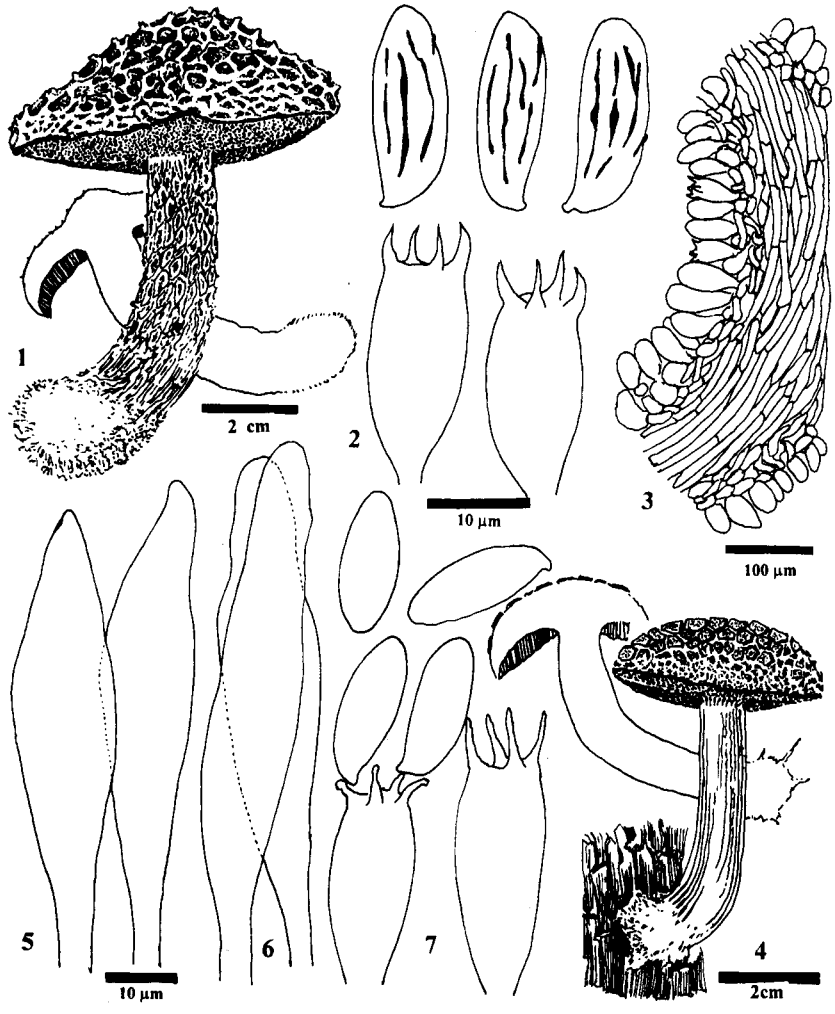

Fig. 1 *Boletellus serpentipileus* Zang et M. S. Yuan 1. Basidiocarps. 2. Basidia and basidiospores. 3. Tube trama.

Xerocomus piceicola Zang et M. S. Yuan 4. Basidiocarps. 5. Pleurocystidia. 7. Basidia and basidiospores.

Habitat: In silvis montium usque ad 1 900 ~ 2 500 m. in *Pini armandii* Mast.

Typus legit prope Yunnan, Chuxiong Zhou (楚雄州), Zixi Mts. (紫溪山) 2 200 m. 24 VII 1997. N. Malajczuk 3. (HKAS 30518 Holotypus!) Ditto HKAS 30519.

Etymology: yunnanensis = collected from Prov. Yunnan.

Hypogeous fungus. Gastrocarp 0.7 ~ 1.2 cm broad, broadly convex, surface glabrous, slimy vis-

cid, smooth at first, irregularly rimose in age, color pallid over at first, slowly becoming pinkish, some with reddish reflections. Context white, fragile, oder not distinctive. Gleba sublamellate, the lamellae crowded, attached at apex of stipe – columella, otherwise free from it. Whitish, exposed around stipe – columella. Stipe – columella 0.5 ~ 0.7 cm long, 0.4 ~ 0.5 cm thick, naked, white. Basidia 20 ~ 30 × 9 ~ 12 μm clavate, 4 – sporigera. Basidiospores 10 ~ 12.5 × 6 ~ 7 μm diam., globose to subglobose, ornamentation in the form of a broken reticulum of branched nodulose lines and scattered isolated particles, the prominent elements 0.3 ~ 0.5 μm high. Pleurocystidia 15 ~ 25 × 6.8 ~ 8 μm fusiform. Cheilocystidia 20 ~ 35 × 8 ~ 17 μm clavate.

Gregarious and hypogeous fungus, always under the *Pinus armandii* Mast. The globose spores and their narrow spaced of ornamentation, readily distinguish this taxon from *Macrowanites pinicola* Smith (Smith, 1963). The later spores are rather widely spaced band of ornamentation and under *Pinus contorta* Dougl. Whereas this is distributed in Idaho, North America.

蛇皮盖条孢牛肝菌

Boletellus serpentipileus Zang et M. S. Yuan, sp. nov. (Fig 1: 1 ~ 3)

Pileus 7 ~ 9 cm latus, convexus demum planoconvexus, siccus, rugulosus, reticulato – venosus, brunneo – flavus, serpentiformis. Contextus 1 ~ 1.6 cm crassus, albus, immutabilis. Hymenium aureum. Tubuli 0.5 ~ 1 cm longi, flavi, adnexi vel sinuato – adnexi. Pori angulares vel irregulares. 14 ~ 18 per cm. Stipes 7 ~ 9 cm longus. 1.5 ~ 2.2 cm crassus, clavatus, reticulatus, basim versus bulbosus, brunneo – flavus. Mycelio albido. Basidiosporae 21 ~ 23 × 6 ~ 6.5 μm angusto – ellipsoideae, disstincte longitudinalis rugiformis. Basidia 25 ~ 30 × 8 ~ 10 μm clavata. 4 – sporigera. Tramae tubi paralleloneurae.

Habitat: Crescit inter frutices usque ad 4350 m.

Sichuan(四川): Jiulong(九龙)Jiqu Shan(鸡丑山)10 Ⅸ 1996. M. S. Yuan 2662. HKAS 31116(Holotypus!)

Pileus 7 ~ 9 cm broad, convex when young, becoming plano – convex when mature, surface dry, yellow – brownish, wrinkled, often tessellately rimose – reticulate, often rimosely cracked, lood like similar with snake skin. Context white, unchanging. Hymenophore adnexed to sinuate adnexed, golden yellow to golden brown and finally more or less yellow – brown. Pores angular to irregular, elongated near the stipe. Stipe 7 ~ 9 cm long, 1.5 ~ 2.2 cm thick, sub – equal, often curved, yellowish brown or pallid above, often white at base, bulbous, coarsely scrobiculate – reticulate with compound meshes 8 ~ 14 × 4 ~ 10 mm and puberulous ridges 2 ~ 4 mm high. Basidiospores 21 ~ 23 × 6 ~ 6.5 μm narrowly ellipsoid, with distinctly longitudinally rugoses. Basidia 25 ~ 30 × 8 ~ 10 μm clavate, 4 – sporigera. Tube – trama parallel with axis. Mycelium white.

By the main features of its basidiomata, *Boletellus serpentipileus* with more particularly pileus, colors and larger spores, this taxon comprised differing from one another in the genus *Boletellus* .

喜杉绒盖牛肝菌

Xerocomus piceicola Zang et M. S. Yuan sp. nov. (Fig.1: 4 ~ 7)

Pileus 4 ~ 5.2 cm latus, convexus demum planocompressus, siccus, tomentosus, rimosus, flavo

– brunneus. Contextus 2 ~ 5 mm crassus, flavus, immutabilis. Hymenium flavum. Tubili 2 ~ 4 mm longi, pori 0.2 ~ 1.5 mm diametri, flavi, sinuato – adnexi vel subdecurrenti, 10 ~ 14 pori per cm. Stipes 4 ~ 5.5 cm longus, 0.8 ~ 1 cm crassus, clavatus, cylindricus et basim versus, flavo – brunneus, tomentosus, longitudinale canaliculatus. Basidia 18 ~ 20 × 9 ~ 10 μm. 4 – sporigera. Basidiosporae 17 ~ 19 × 6 ~ 6.5 μm ellipsoideae, leves, hyalino – flavescens. Pleurocystidia 32 ~ 40 × 7 ~ 15 μm fusiformoa. Cheilocystidia 35 ~ 45 × 10 ~ 18 μm clavata.

Habitat: In corticem et ligno *Picetis asperatae* Mast.

Gansu(甘肃): Wudu(武都), Shahetan(沙河滩) 2 700 m. 11 Ⅶ 1996. M. X. Yuan 2216. HKAS 30540 Holotypus!

Etymology: picei = the genus *Picea*, cola = exists.

Pileus convex to plane, 4 ~ 5.2 cm broad, surface dry, tomentose, marked with numerous cracks, yellowish – brown, ochre – brown. Context 2 ~ 5 mm broad, yellowish – white, not changing when bruised. Hymenophore sinuate, adnate, usually narrowly so, or depressed around the stipe, possibly subdecurrent, often becoming nearly free, yellow or golden yellow. Tubes 3 ~ 4 mm long, pores 0.1 ~ 0.4 mm diameter, 10 ~ 14 pores per cm. Stipe up to 4 ~ 5.5 cm long. 0.8 ~ 1 cm thick, clavate, cylindric to subequal or nearly so, or evenly enlarged downward, yellowish, tomentose, usually somewhat longitudinaly sulcate. Basidia 18 ~ 20 × 9 ~ 10 μm. 4 – sporigera. Basidiospores 17 ~ 19 × 6 ~ 6.5 μm ellipsoid, broad ellipsoid, smooth, yellowish hyaline. Pleurocystidia 32 ~ 40 × 7 ~ 15 μm fusiform. Cheilocystidia 35 ~ 45 × 10 ~ 18 μm clavate.

This new taxon, it shows the special habit which growing on the trunk of the genus Picea. Probably it is saprotrophic not mycorrhizal fungus, the size of basidiospores are almost larger than anyone of this genus.

松针绣耳

Crepidotus pinicola Zang, sp. nov. (Fig. 2: 1 ~ 5)

Pileus 1.7 ~ 2.2 mm latus, flabelliformis demum spatulatus, albus, glabrosus, margine striatus. Lamellae albae, angustae, subdistantes. Stpes 1.2 ~ 1.7 × 0.1 ~ 0.5 mm cylindricus, eccentricus, curvus, brevissimus, villosus, albus et fulvus. Basidia 20 ~ 26 × 5.2 ~ 9 μm clavata, 4 ~ 8 sporigera. Basidiosporae 7.8 ~ 10.4 × 5.2 ~ 6.8 μm ovoideae vel ellipsoideae, punctatae. Pleurocystidia 35 ~ 40 × 6 ~ 10 μm subulata. Cheilocystidia 30 ~ 35 × 12 ~ 19 μm ventrico – fusiformia vel lageniformia. Fibulatae adsunt.

Habitat: In sylvis montium usque ad 2100. infoliis emortuis *Pini armandii* Mast.

Typus legit prope Yunnan(云南): Chuxiong Zhou(楚雄州), Zixi Mts. (紫溪山) 2 100 m. on rotten needles of *Pinus armandii* Mast. 22 Ⅸ 1997. Zang 12874. HKAS 30570 Holotypus! Ditto 22 Ⅸ 1997 T. X. Zhou(周同燊) 128. HKAS 30573.

Crepidotus pinicola is characterized by a small size basidiocarps, the pileus only with 1.7 ~ 2.2 mm diameter, the special habit is differs with relative species of the genus *Crepidotus*, the sporulation easily to find in dense clusters on the rotten needles of Pinus armandii Mast.

长柄灰包

Lycoperdon longistipum Zang et M. S. Yuan, sp. nov. (Fig. 2: 10 ~ 11)

Peridium globosum, subglobosum usque turbinatum, 8 ~ 10 longa, 3 ~ 4 cm diam. Exoperidium initio album, apice fulvidum, demum ochraceum vel fumaginosum, furfuraceum. Subtiliter granuloso – verrucosum. Endoperidium tenue ochraceum. Gleba olivacea, fuscenscens, purpurascens, bais sepimento. Diaphragma praesentia. Paracapillitium luteo – brunneum, 3 ~ 4.5 μm. non septatum.

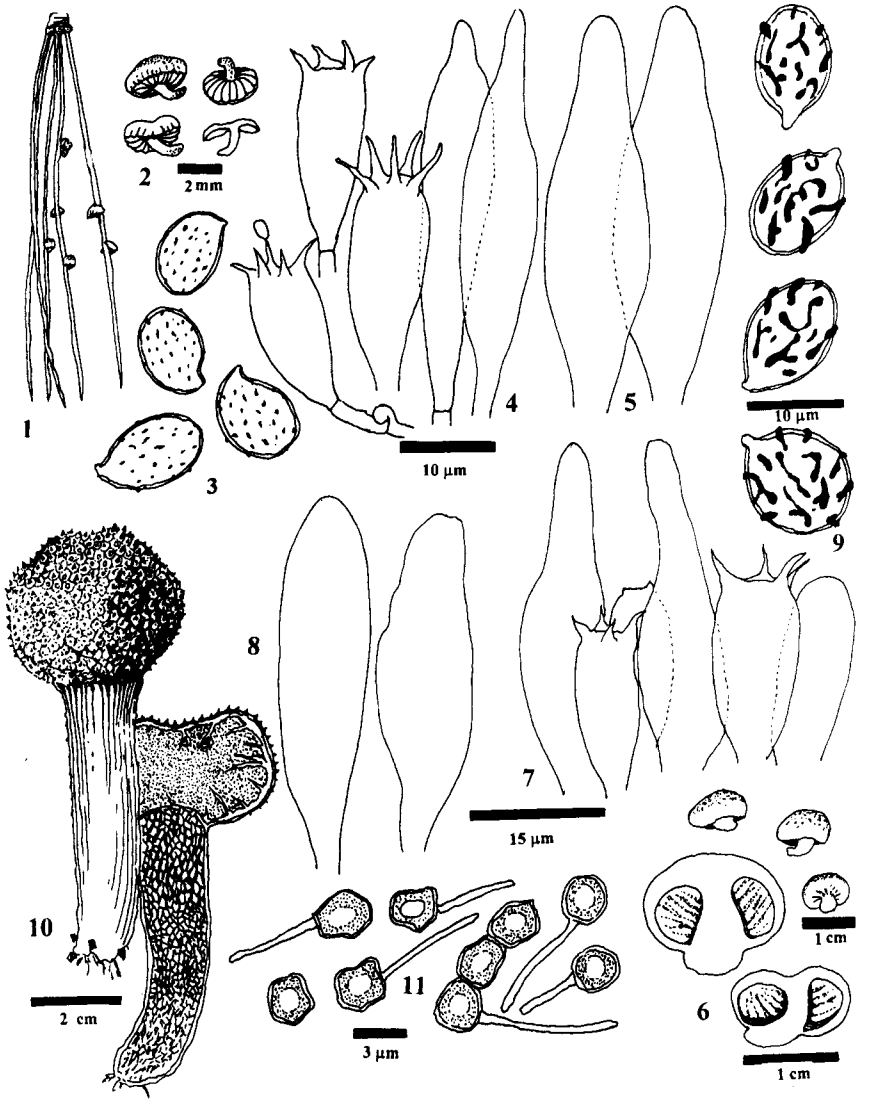

Fig. 2 *Crepidotus pinicola* Zang 1. Basidiocarps growing on Pine needles. 2. Basidiocarps. 3. Basidia & basidiospores. 4. Pleurocystidia. 5. Cheilocystidia; *Macrowanites yunnanensis* Zang 6. Basidiocarps. 7. Basidia & pleurocystidia. 8. Cheilocystidia. 9. Basidiospores; *Lycoperdon longistipum* Zang et M. S. Yuan 10. Basidiocarps. 11. Basidiospores.

Stipes 6 ~ 7 cm longus, 1 ~ 2 cm crassus, clavatus, spongiosus. Basidiosporae subglobosae, subglobosae, subangulato – ovatae, olivaceo – brunneae, leaves vel subtiliter verrucosae, 2.6 ~ 3.9 μm diam. parsae, reliquiis sterigmatorum intermixtae.

Habitat: In pascuis siccis.

Sichuan(四川) Luding(泸定), Hailuogou(海螺沟), 3 000 m, in dry pastures, on the soil. 1 Ⅸ 1996. M. S. Yuan 2561. HKAS 31030. Holotypus! Ditto: Kangding(康定), Mugecuo(木格措), Yerenhai(野人海)3 700 m, *Abies* & *Rhododendron* forest, 7 Ⅷ 1997. P. Q. Sun(孙佩琼) 2868. HKAS 31302.

Etymology: longi = long, stipum = stipe.

Peridium globose, subglobose to turbinate. 8 ~ 10 cm long, 3 ~ 4 cm diameter. Exoperidium of small fugacious warts, larger towards the apex, ochre – yellow or smoky brown inmature. Endoperidium ochre – yellow, bay brown, smooth, membranous, dehiscing by a small erumpent torn stoma. Gleba olivaceous, dark brown, often purplish, pseudo – columella wanting. Paracapillitium threads freely branched deeply colored, pitted. Basidiospores globose, subangular ovoid, olivaceous brown, smooth and distinctly verruculose, 2.6 ~ 3.9 μm in diameter, pedicels long, persistent, acuminate. Stipes well developed 6 ~ 7 cm long. 1 ~ 2 cm broad, which composed of compact hyphae or cells. Diaphragm present.

The well developed sterile base with spongy stuffed tissue, the most variable of globose and subangular ovoid spores, vary in form and size with long pedicels. Simultaneously, it always distributed above 3 000 m alt. The authors believe that the above mentioned species usually do not occur in any other relative taxa of the genus *Lycoperdon* .

Acknowledgements The authors wish to thank Prof. W. F. Chiu for his benevolent guidance and Prof. T. X. Zhou and P. Q. Sun for their helps on collections and sent the specimens. This project has been supported by the National Natural Foundation of China under project No. 39470004.

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